Figure 1

Cao
AUS920010197US1
Method, Apparatus, and Program for Finding and
Navigating to Items in a Set of Web Pages
Page 1 of 11
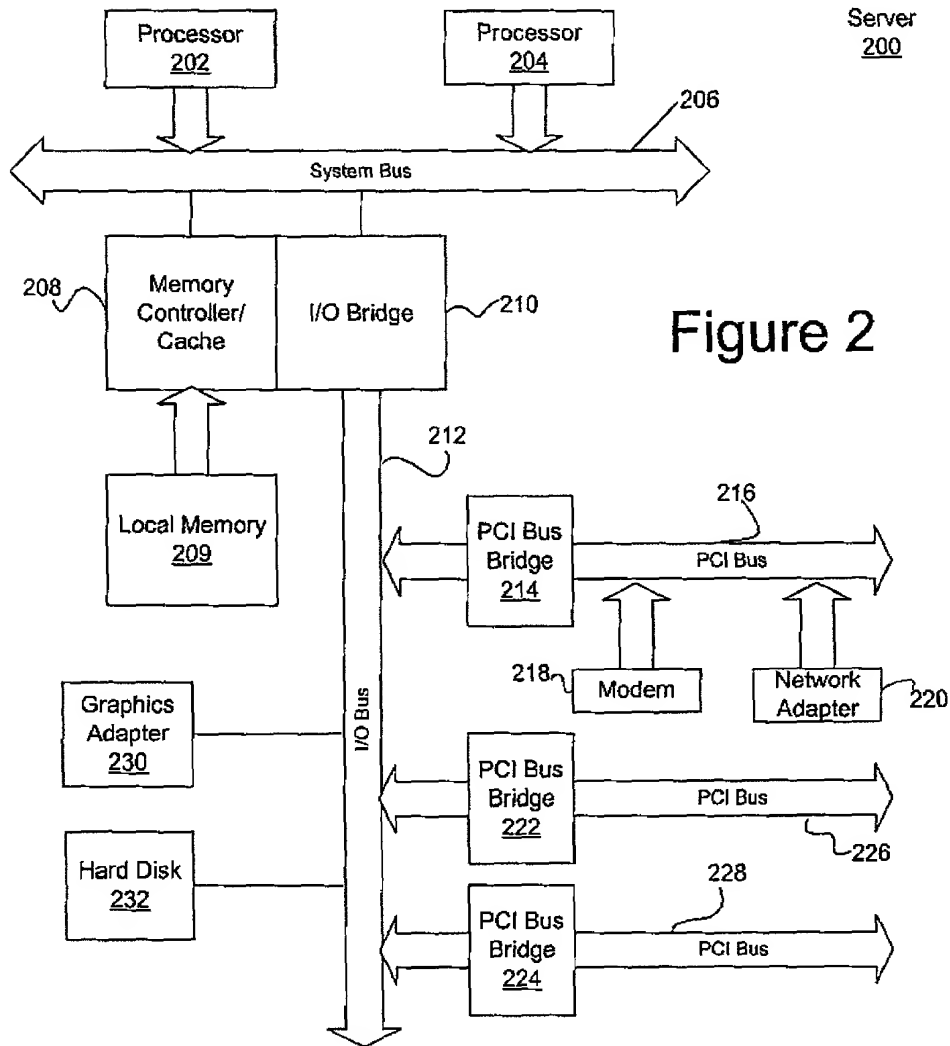
108

Client

110

Client

104

Server

102
Network

112

Client

100

Storage

106

200

Processor
202

Processor
204

Server
200

206

System Bus

208

Memory
Controller/
Cache

I/O Bridge

210

Figure 2

Local Memory
209

212

216

PCI Bus
Bridge
214

PCI Bus

218

Modem

Network
Adapter

220

I/O Bus

Graphics
Adapter
230

PCI Bus
Bridge
222

PCI Bus

226

Hard Disk
232

228

PCI Bus
Bridge
224

PCI Bus

Figure 3

Client 300

Processor 302 — Host/PCI Cache/Bridge 308 — Main Memory 304

Bus 306

Audio Adapter 316

Audio/Video Adapter 319

Graphics Adapter 318

Expansion Bus Interface 314

LAN Adapter 310

SCSI Host Bus Adapter 312

Disk 326

Tape 328

CD-ROM 330

Keyboard and Mouse Adapter 320

Modem 322

Memory 324

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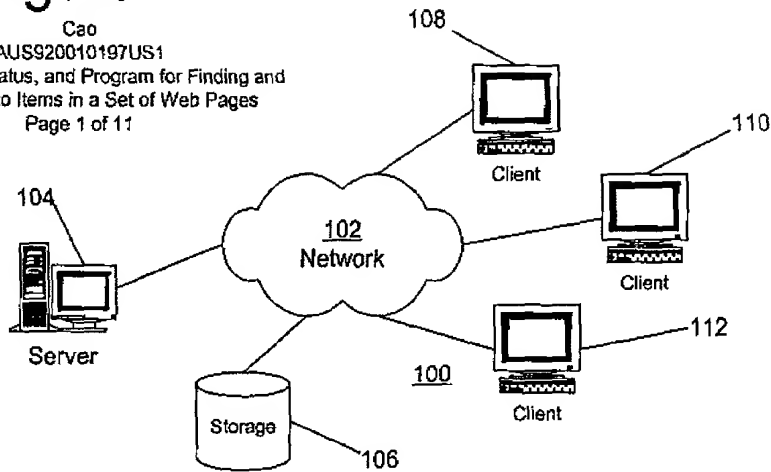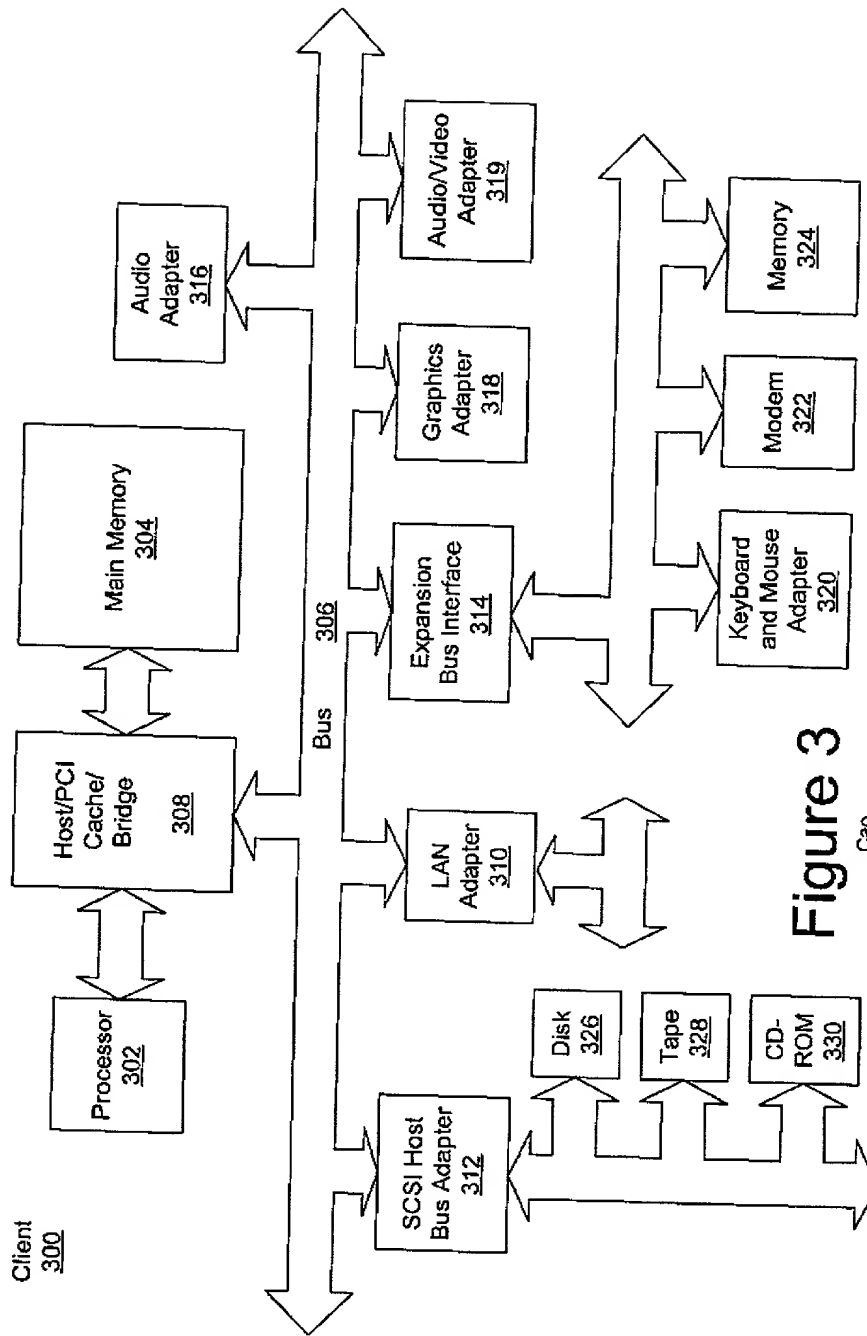412 → | File Edit View Insert Format Tools Window Help
414 → | Back | Forward | Stop | Refresh | Home | Print |

416 → # Ultimate Start Page

The one place to stop for news, sports, shopping, sto[ ]
quotes, humor, entertainment, games, and weather.

Headline News	Ultimate Li[ ]
Headline News Story Headline One	>News
Headline News Story Headline Two	>Business
Headline News Story Headline Three	>Sports
Headline News Story Headline Four	>Stock Quote[ ]
Headline News Story Headline Five	>Humor
Business News	>Entertainme[ ]
	>Games
Business News Story Headline One	>Weather
Business News Story Headline Two	
Business News Story Headline Three	
Business News Story Headline Four	
Business News Story Headline Five	
Sports News	

Figure 4A

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and Navigating to Items in a Set of Web Pages
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File Edi: View Insert Format Tools Window Help	← 420
Back	Forward	Stop	Refresh	Home	Print		

← 426

Most Recently Visited Link:
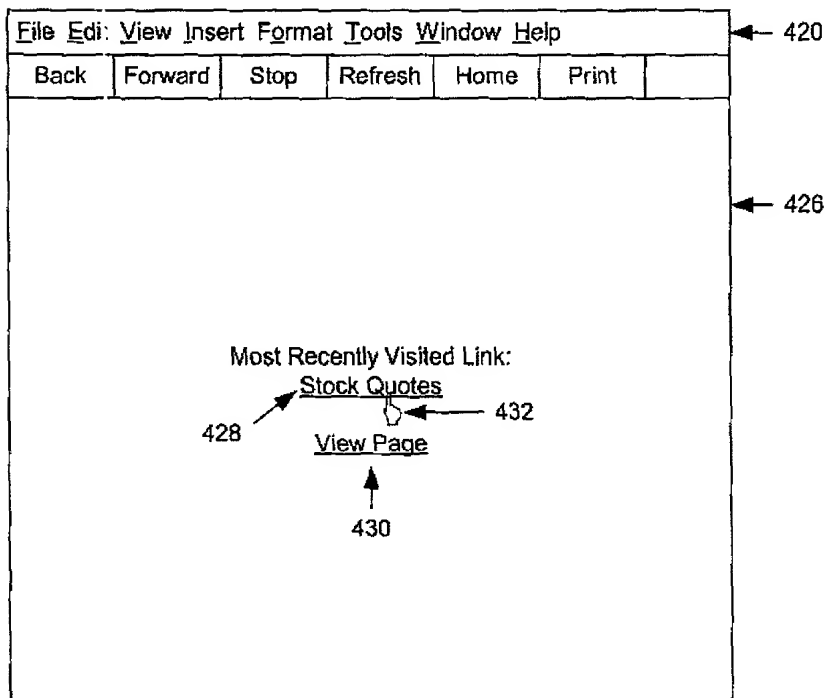
Stock Quotes

428 ⟋ ← 432

View Page

↑

430

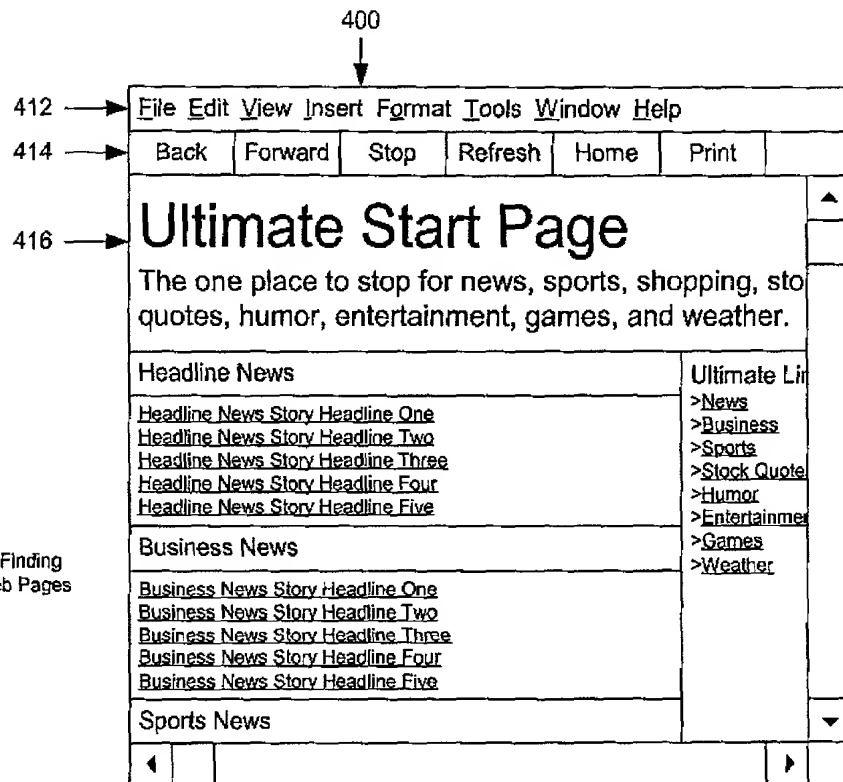## Figure 4B

Figure 4C

Cao
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Method, Apparatus, and Program for Finding
and Navigating to Items in a Set of Web Pages
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450

File Edit View Insert Format Tools Window Help

| Back | Forward | Stop | Refresh | Home | Print |

470 →

Most Recently Visited Links:	Most Frequently Visited Links:
✓ Stock Quotes	✓ Stock Quotes
✓ Sports	✓ Weather
✓ News	✓ Shopping

Ultimate Start Page

436 → The one place to stop for news, sports, shopping, sto
quotes, humor, entertainment, games, and weather.

Headline News	Ultimate Li
Headline News Story Headline One	>News
Headline News Story Headline Two	>Business
Headline News Story Headline Three	>Sports
Headline News Story Headline Four	1> Stock Quo
Headline News Story Headline Five	>Humor
Business News	>Entertainme
	>Games
Business News Story Headline One	2>Weather

— 472

602 — A1

604 — B1   B2 — 606

608 — C1   C2 — 610

Figure 6

File Edit View Insert Format Tools Window Help

| Back | Forward | Stop | Refresh | Home | Print | |

Lecture

The structure of the circuit is shown in the circuit diagram. To hear a sample output of the circuit, listen to the circuit output.
There is an alternative design.
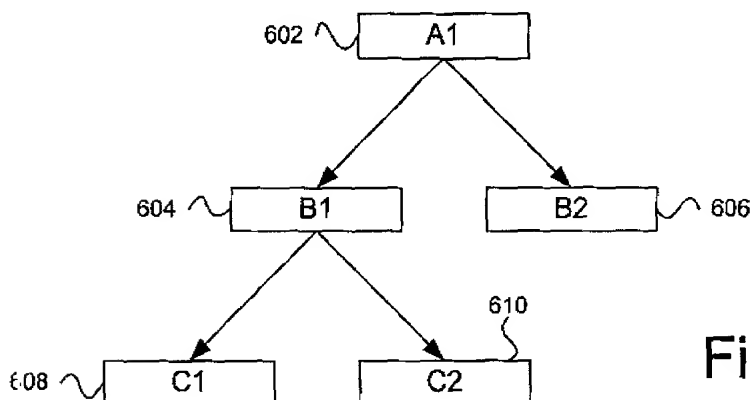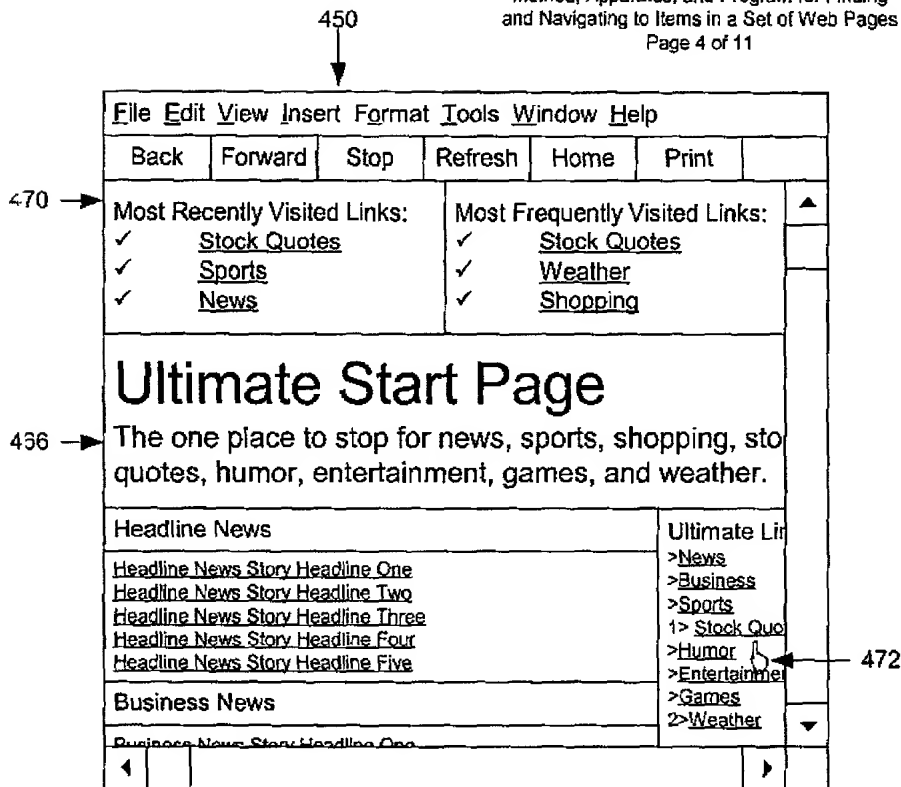
If you have any questions, e-mail the professor.

500

516

Figure 5A

Cao
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Method, Apparatus, and Program
for Finding and Navigating to Items
in a Set of Web Pages
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| Back | Forward | Stop | Refresh | Home | Print | |

520

526

Diagram Links:
circuit diagram
-> Figure
View Page

528

532

530

Figure 5B

File Edit View Insert Format Tools Window Help

| Back | Forward | Stop | Refresh | Home | Print | |

Diagram Links:
✓   circuit diagram
✓   -> Figure

560

Lecture

The structure of the circuit is shown in the ✓ circuit diagram. To hear a sample output of the circuit, listen to the circuit output.
There is an ->alternative design.

If you have any questions, e-mail the professor.

550

556

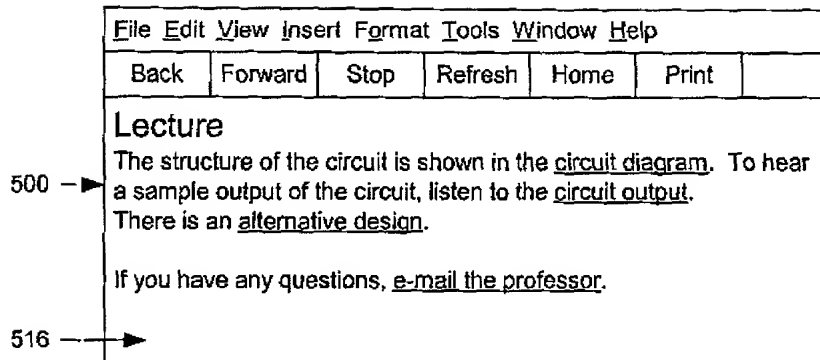# Figure 5C

Cao
AUS920010197US1
Method, Apparatus, and Program for
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File Edit View Insert Format Tools Window Help

| Back | Forward | Stop | Refresh | Home | Print | |

Diagram Links:

circuit diagram   Next>

Figure 5D

File Edit View Insert Format Tools Window Help

| Back | Forward | Stop | Refresh | Home | Print | |

Diagram Links:
✓   Figure

Lecture (cont)

The structure of the alternative circuit is shown in the ✓ Figure.

If you have any questions, e-mail the professor.

Figure 5E

File Edit View Insert Format Tools Window Help

| Back | Forward | Stop | Refresh | Home | Print | |

Diagram Links:
<Prev   Figure

Figure 5F

Figure 7A

Cao
AUS920010197US1
Method, Apparatus, and Program for Finding
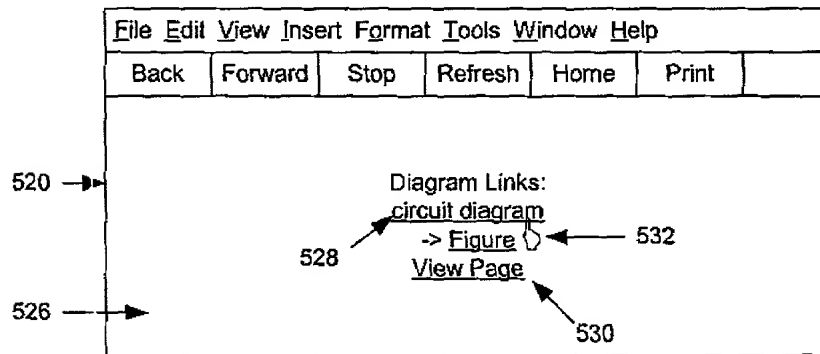and Navigating to Items in a Set of Web Pages
Page 7 of 11

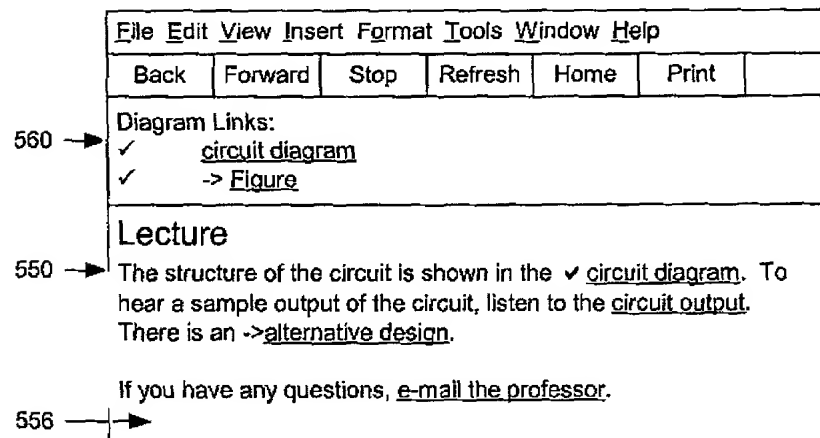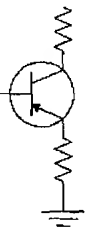| User 1 Click Sequence 722	User 2 Click Sequence 724	User 3 Click Sequence 726

Server
702

Server Side

Client Side

User 1 Terminal 712	User 2 Terminal 714	User 3 Terminal 716

Server
752

Server Side

Client Side

User 1 Terminal 762	User 2 Terminal 764	User N Terminal 766

User 1 Click Sequence 772	User 2 Click Sequence 774	User N Click Sequence 776

Figure 7B

Figure 8

800

| Graphical User Interface |
| 802 |

| Menus | Preferences | Navigation |
| 804 | 808 | 806 |

| Graphical Display |
| 818 |

| Layout | Rendering | Window Management |
| 820 | 822 | 824 |

Link Highlighting 850

| Language Interpretation |
| 812 |

| HTML | Javascript |
| 814 | 816 |

| Communications |
| 810 |

Figure 9A

Cao
AUS920010197US1
Method, Apparatus, and Program
fo Finding and Navigating to Items
in a Set of Web Pages
Page 9 of 11

```
        ( Begin )
           │
           ▼
┌─────────────────────┐
│ User Conducts Tour of│
│  Normal Web Paths    │
│        902           │
└─────────────────────┘
           │
           ▼
┌─────────────────────┐
│ Determine Sequence   │
│ of Web Pages Visited │
│        904           │
└─────────────────────┘
           │
           ▼
┌─────────────────────┐
│  Store Sequence and  │
│      User ID         │
│        906           │
└─────────────────────┘
           │
           ▼
        (  End  )
```

Figure 9B

```
                        ( Begin )
                           │
                           ▼
              ┌─────────────────────┐
              │ User Starts with Top │
              │        Page          │
              │         912          │
              └─────────────────────┘
                           │
                           ▼
    ┌──────────▶┌─────────────────────┐
    │           │ Determine Recently   │
    │           │     Used Link        │
    │           │         914          │
    │           └─────────────────────┘
    │                      │
    │                      ▼
    │           ┌─────────────────────┐
    │           │ Display Recently Used│
    │           │   Link(s) First      │
    │           │         916          │
    │           └─────────────────────┘
    │                      │
    │                      ▼◀──────────── no ──────────┐
    │                  ╱RU Link╲                   ╱Display╲
    │                 ╱ Selected? ╲── no ──────────▶ Page?  ╲
    │                 ╲    918    ╱                 ╲  926  ╱
    │                  ╲        ╱                     ╲    ╱
    │                      │ yes                         │ yes
    │                      ▼                             ▼
    │           ┌─────────────────────┐      ┌─────────────────────┐
    │           │  Update Sequence     │      │ Display Remainder of │
    │           │        920           │      │       Page           │
    │           └─────────────────────┘      │        928           │
    │                      │                  └─────────────────────┘
    │                      ▼                             │
    │           ┌─────────────────────┐                 ▼
    │           │ Begin Displaying Page│      ┌─────────────────────┐
    │           │        922           │      │  Update Sequence     │
    │           └─────────────────────┘      │        930           │
    │                      │                  └─────────────────────┘
    │                      ▼                             │
    │                  ╱Bottom ╲                          ▼
    └─── no ──────────╱  Page?  ╲── yes ──────────▶   (  End  )
                      ╲   924   ╱
                       ╲       ╱
```
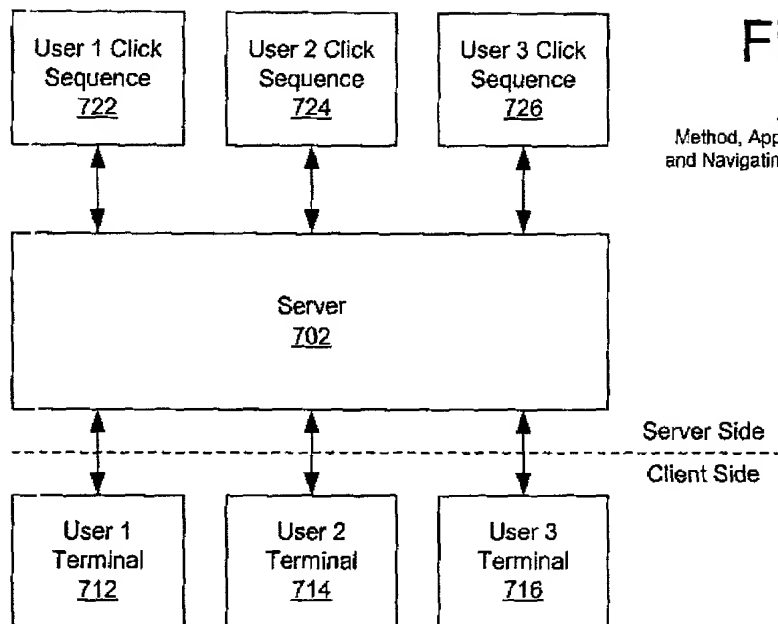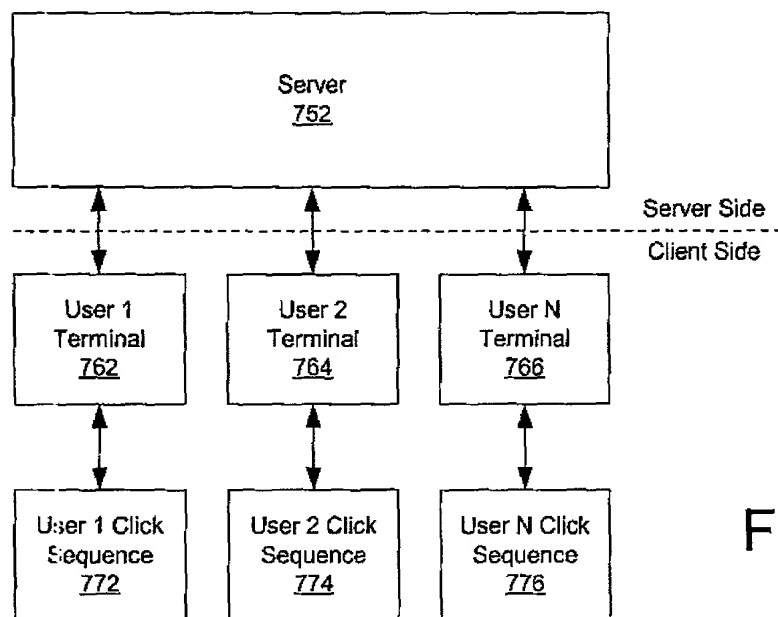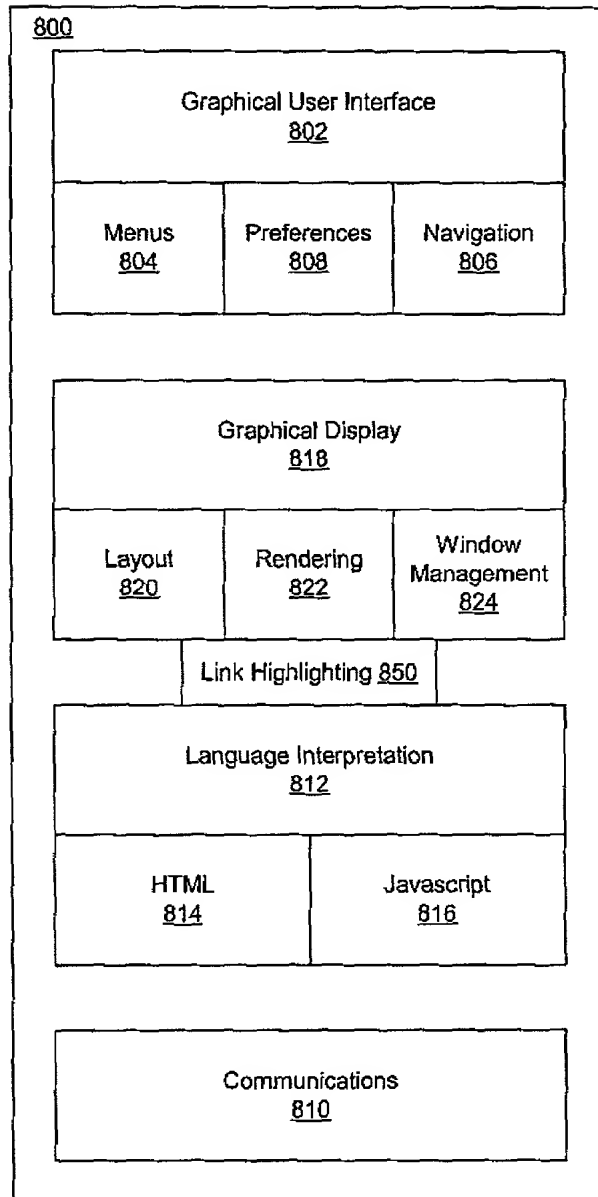
Figure 9C

Cao
AUS920010197US1
Method, Apparatus, and Program for
Finding and Navigating to Items in a
Set of Web Pages
Page 10 of 11

Begin

↓

User Starts with Top
Page
952

↓

Determine Frequently
Used Link
954

↓

Display Frequently
Used Link(s) First
956

↓   ←──no──┐

FU Link
Selected?   ──no──→   Display
958   Page?
                       966

│ yes   │ yes

↓   ↓

Update Sequence   Display Remainder of
960   Page
                       968

↓   ↓

Begin Displaying Page Update Sequence
962   970

↓   ↓

──no── Bottom   End
        Page?   ──yes──→
        964
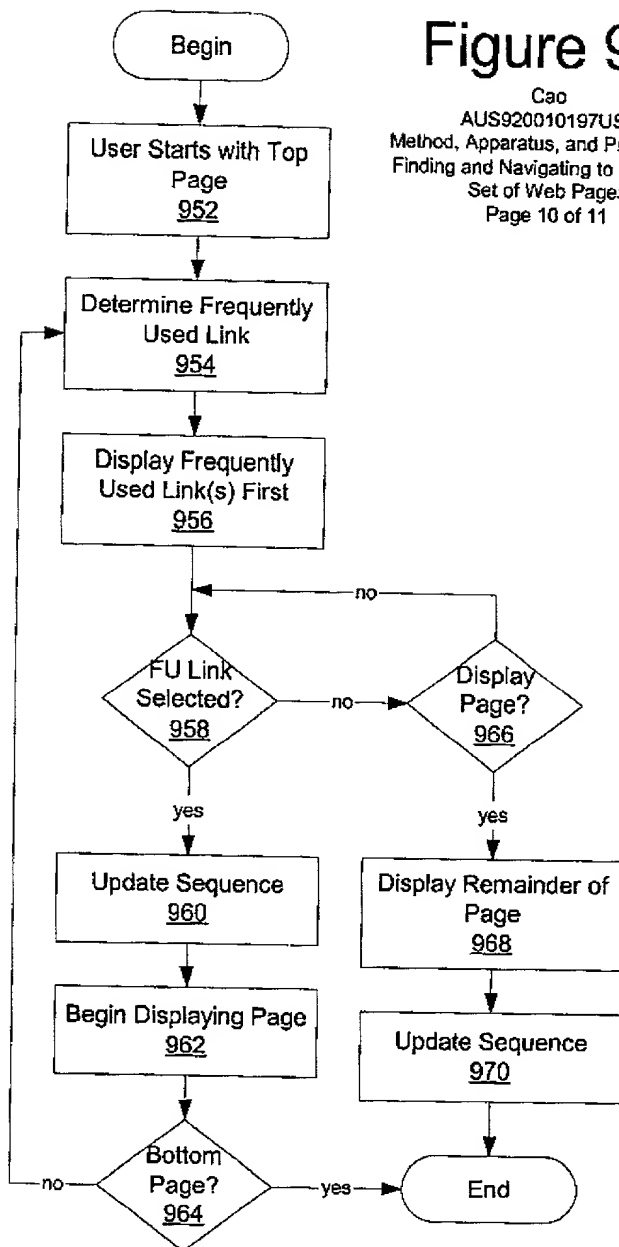
Figure 10

Cao
AUS920010197US1
Method, Apparatus, and Program for Finding
and Navigating to Items in a Set of Web Pages
Page 11 of 11

```
                    ( Begin )
                        │
                        ▼
          ┌──────────────────────────┐
          │    Receive Desired       │
          │   Properties for Links   │
          │          1002            │
          └──────────────────────────┘
                        │
                        ▼
          ┌──────────────────────────┐
          │    Determine Chained     │
          │    Links with Desired    │
          │        Properties        │
          │          1004            │
          └──────────────────────────┘
                        │
                        ▼
          ┌──────────────────────────┐
          │   User Starts with Top   │
          │          Page            │
          │          1006            │
          └──────────────────────────┘
                        │
                        ▼
          ┌──────────────────────────┐
          │   Determine Links That   │
          │    Contain Properties    │
          │          1008            │
          └──────────────────────────┘
                        │
                        ▼
          ┌──────────────────────────┐
          │    Display Links that    │
          │    Contain Properties    │
          │          1010            │
          └──────────────────────────┘
                        │◄─────────────no───────────────┐
                        ▼                                │
                   ╱─────────╲                      ╱─────────╲
                  ╱   Link     ╲                    ╱  Display  ╲
                 ◄   Selected?  ──── no ──►          Page?     ╲
                  ╲   1012     ╱                    ╲   1016    ╱
                   ╲─────────╱                       ╲───────╱
                        │                                │
                       yes                              yes
                        │                                │
                        ▼                                ▼
          ┌──────────────────────────┐      ┌──────────────────────────┐
          │  Display Item of Interest │      │   Display Remainder of    │
          │          1014            │      │           Page            │
          └──────────────────────────┘      │          1018             │
                        │                    └──────────────────────────┘
                        │                                │
                        └────────────┬───────────────────┘
                                     ▼
                                 (  End  )
```